

# ***Walkability and Livability***





# ***Where do we go from here?***





# ***Clark County: Growing Healthier*** **A Symposium for Policymakers and Planners**



**By Dan Burden**  
**Livable and Walkable Communities Institute**





Is this the landscape we want to leave  
our children?









**If you plan cities  
for cars and  
traffic, you get  
cars and traffic.**



**If you plan for  
people and  
places, you get  
people and  
places.**











**West Lafayette, Indiana      (Home of Purdue University)**



# Linking the Centers across US29

## Berkmar Drive zoomed in at Fashion Square

























# Extending the road network

End of Berkmar at Sam's Club, parallel to US29





























**8-10 du/a net**



**11-12 du/a net**



THE  
GENERAL MOTORS  
EXHIBIT BUILDING



*New York World's Fair*  
HIGHWAYS AND HORIZONS



“Abundant sunshine, fresh air, fine green parkways will blend together seamlessly with dazzling skyscrapers and seven-lane highways.”



THE  
GENERAL MOTORS  
EXHIBIT BUILDING



*New York World's Fair*  
HIGHWAYS AND HORIZONS



"If we are to have full use of automobiles, cities must be remade...awaiting industry that will do wonders, for prosperity will spring up when we revamp our cities"

...Post Magazine (circa 1930)



If it weren't for the damn  
pedestrian there would be no  
traffic problem in Los Angeles...

... circa 1972, Los Angeles Traffic Engineer

Compact villages and a strong civilian  
presence is the only solution to our  
traffic problems...

... circa 1995, San Diego Traffic Engineer





# What is the Purpose of Cities?



**Cities are an invention to maximize exchange (goods, culture, friendship, knowledge) and to minimize travel.**

**The role of transport is to maximize exchange.**

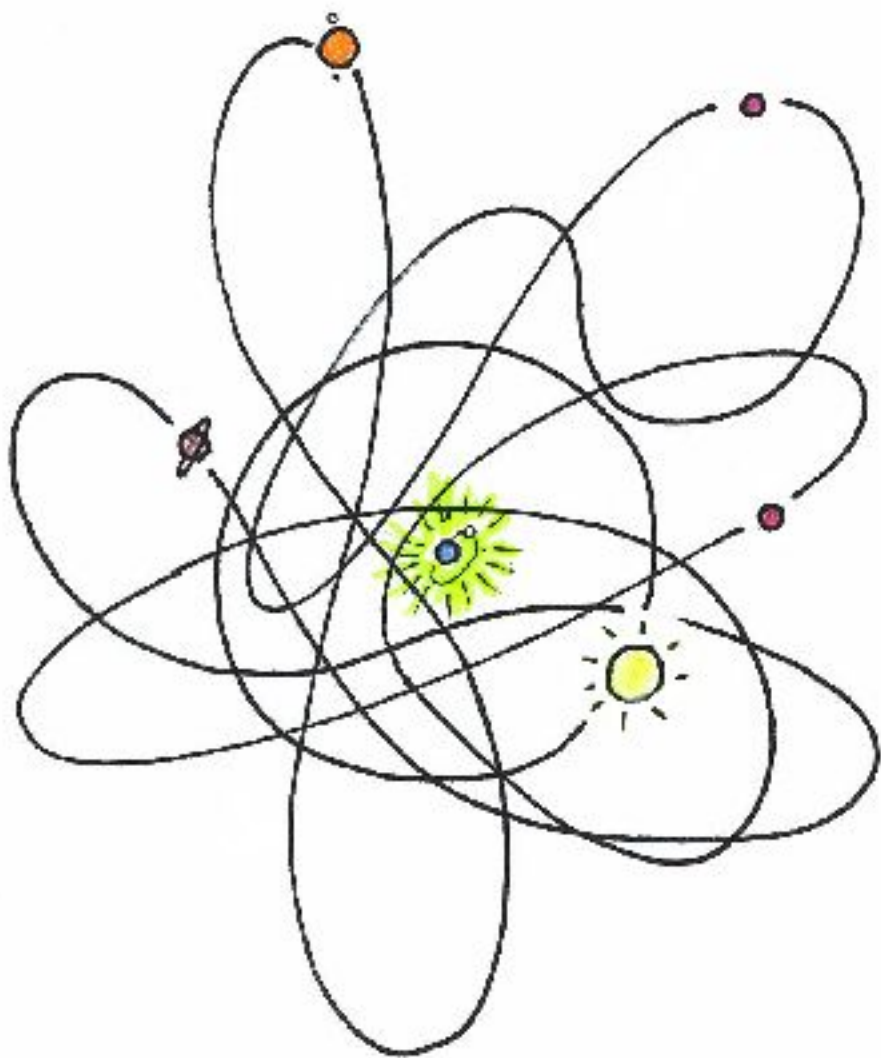
**....David Engwicht**

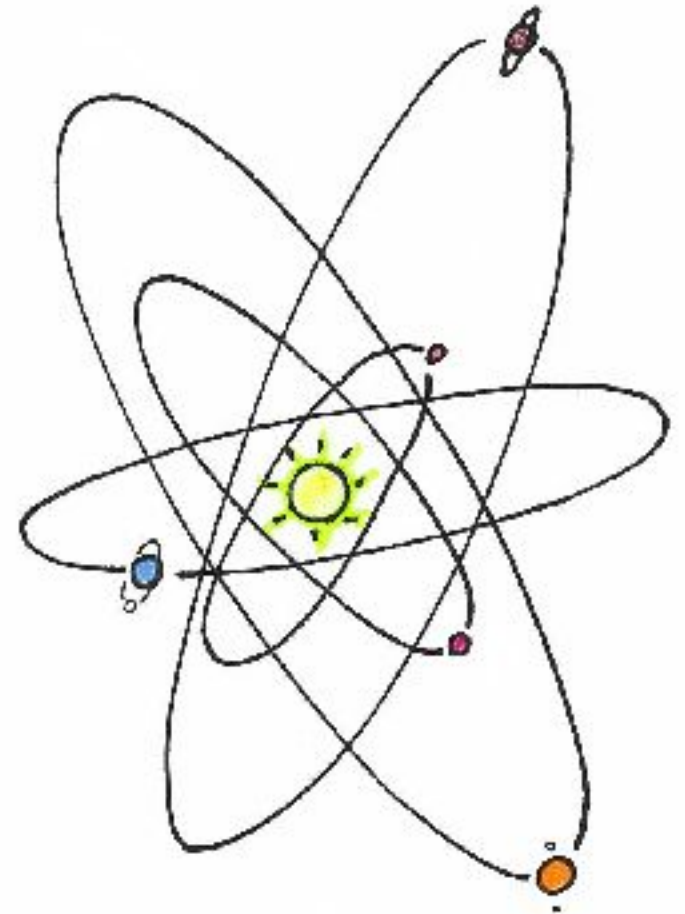
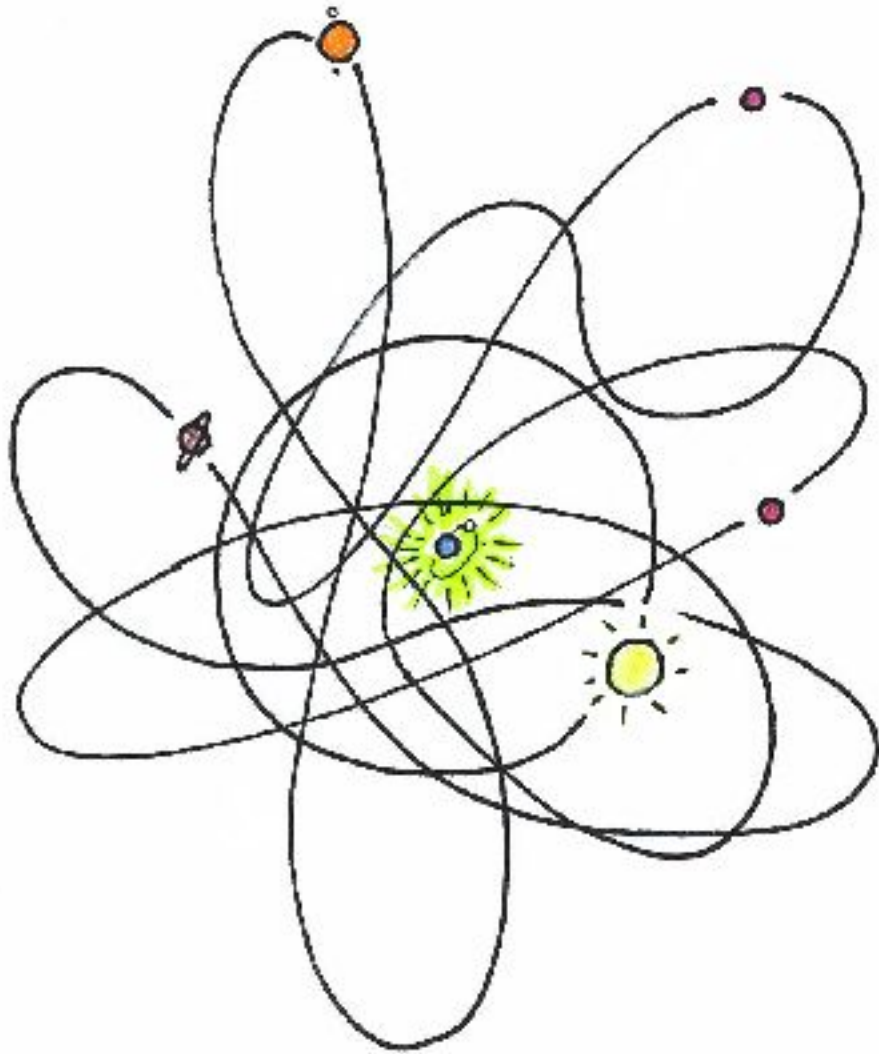




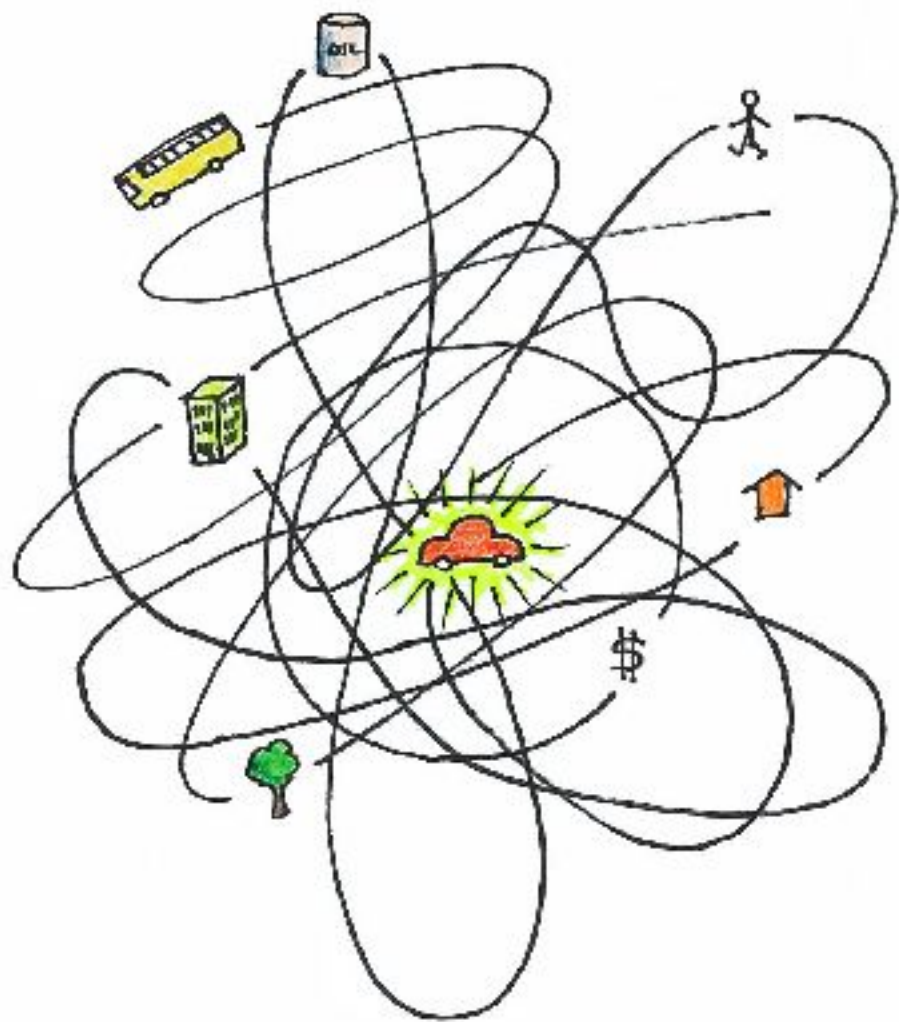


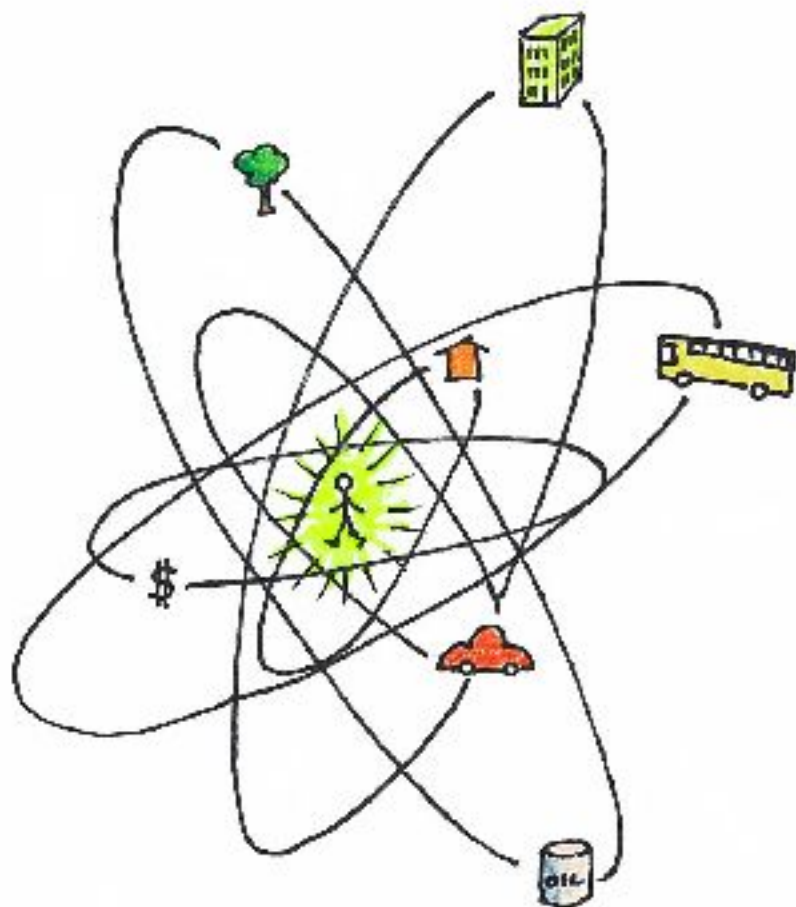
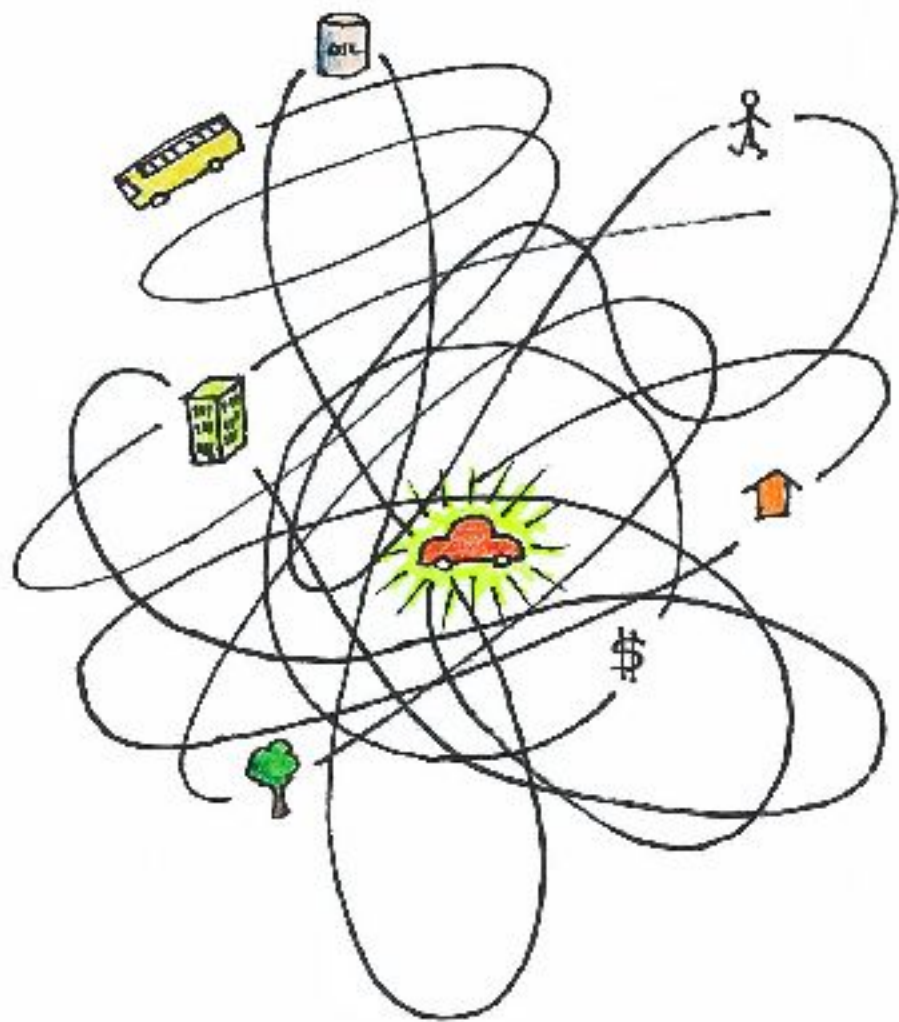














**“I am more and more convinced that our happiness depends more on the way we meet the events of life than on the nature of those events themselves.”**



**“I am more and more convinced that our **happiness** depends more on the way we meet the events of life than on the nature of those events themselves.”**

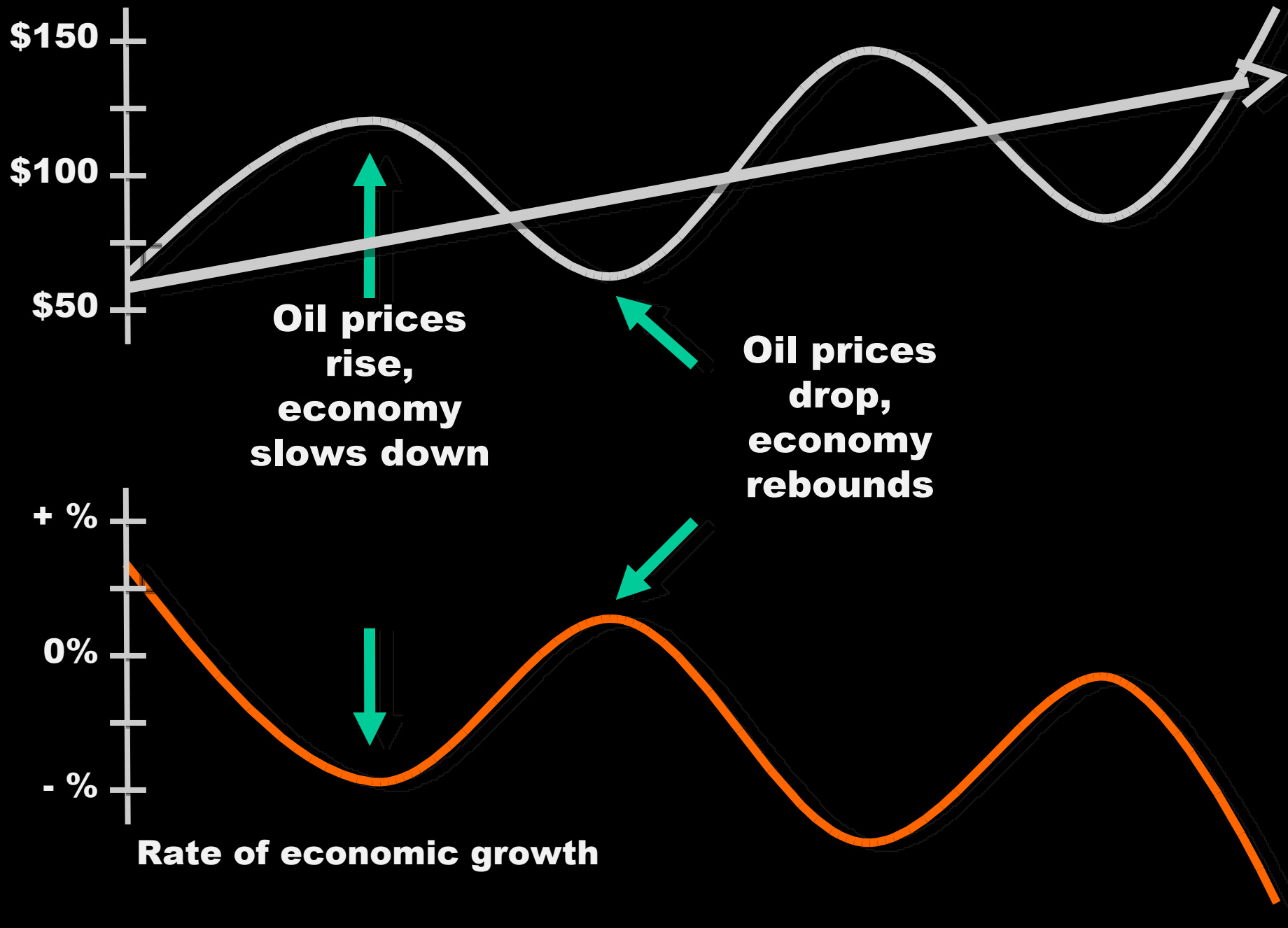


**We are entering uncharted territory.**

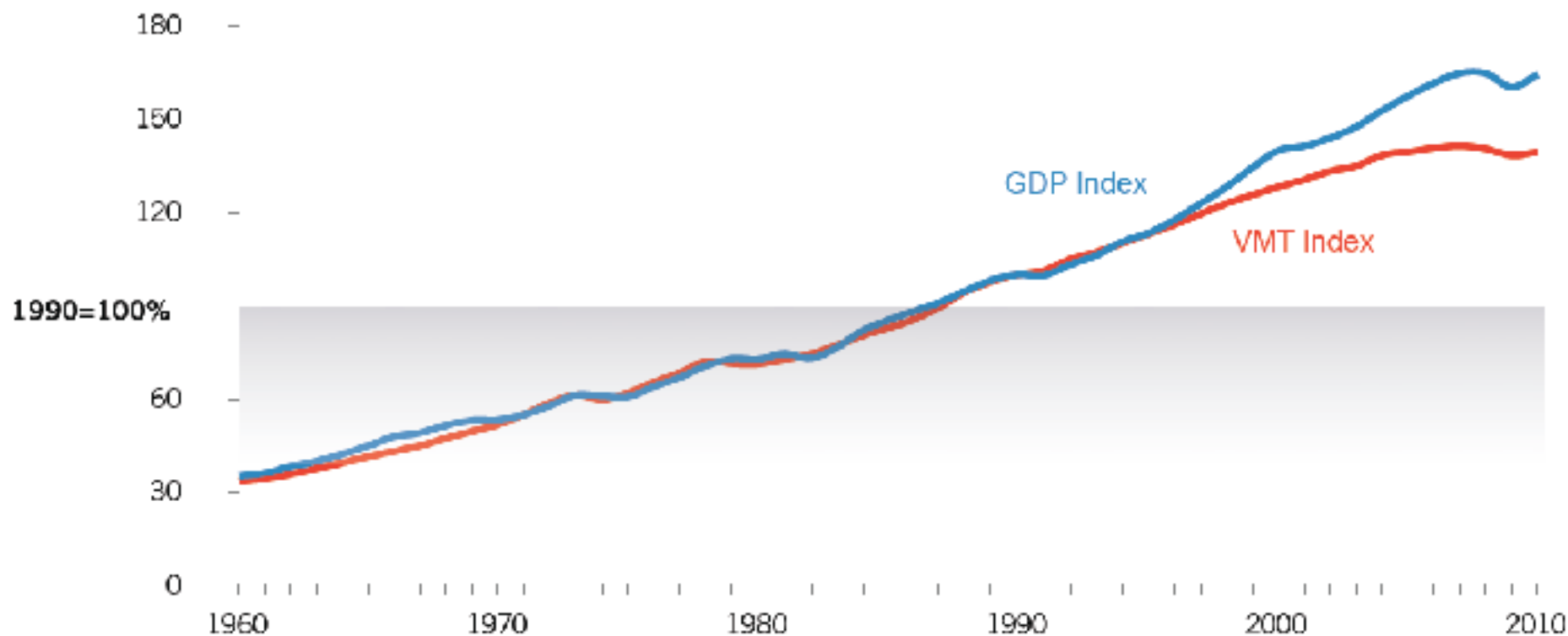
**We do not yet know fully where we will land ... but a good landing will only come about if we**



# Oil price per barrel



# VMT and GDP



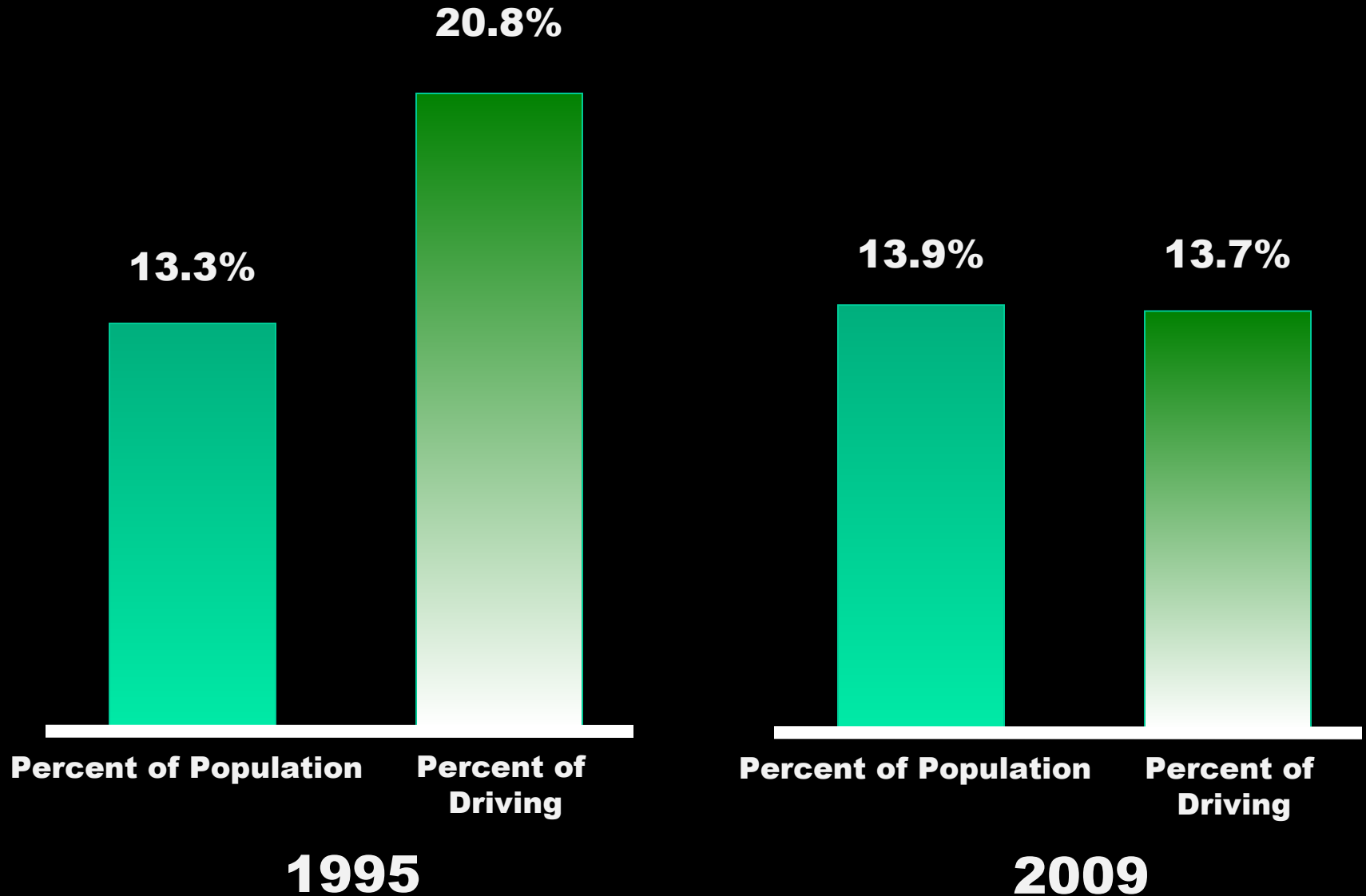
Data Sources: VMT: US DOT, BTS, Table 1-32: US Vehicle Miles, FHWA Traffic Volume Trends August 2010. GDP: BEA National Income and Product Account Table, Table 1.1.6 Real GDP, Chained (2005) Dollars

**Source: "Growing Wealthier – Smart Growth, Climate Change and Prosperity"  
January 2011 Center for Clean Air Policy**

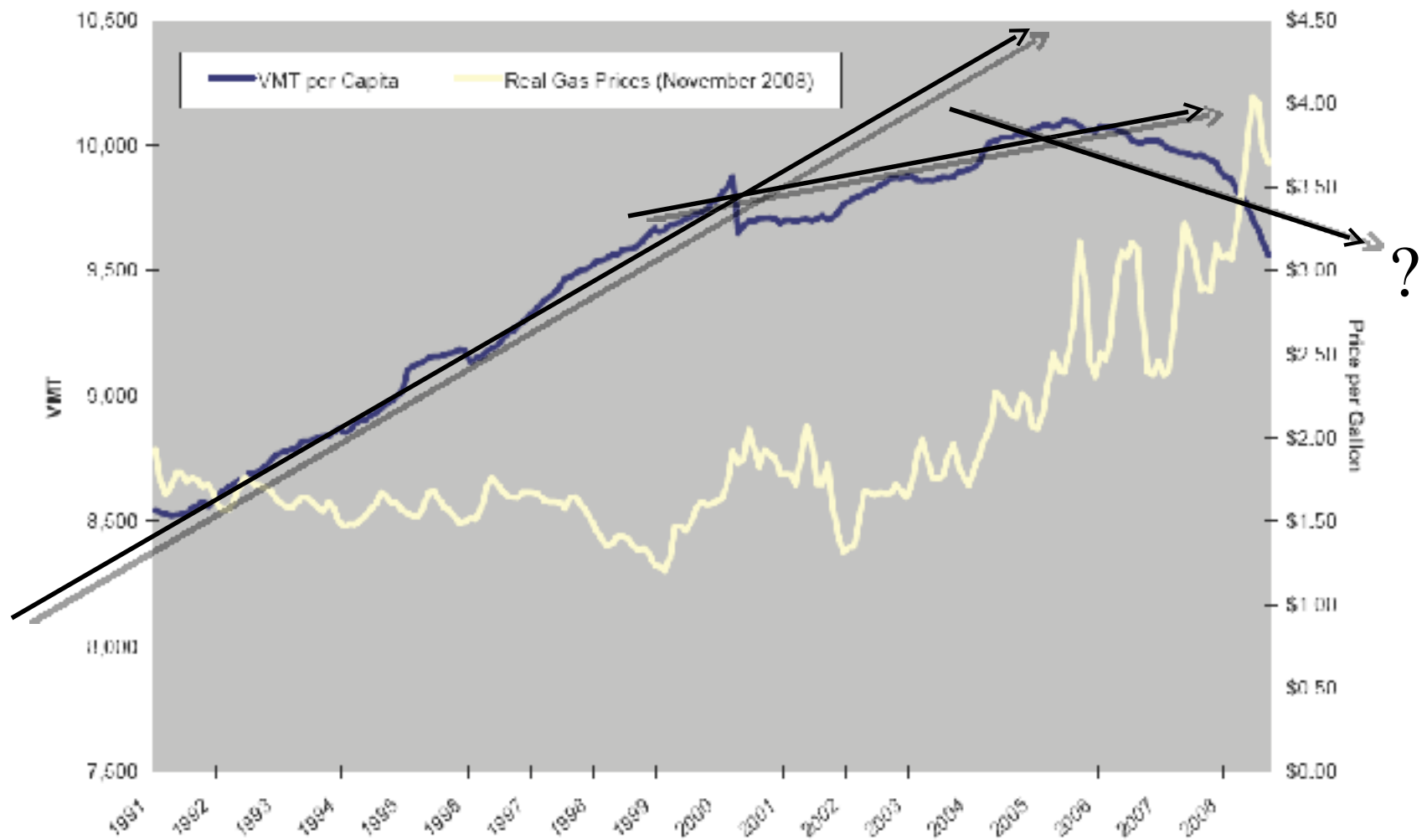


# Millennials Are Driving Less

18 – 24 Years of Age



**Figure 1b. U.S. Vehicle Miles Traveled Per Capita, Annualized and Real Gasoline Pump Prices, January 1991–September 2008**



Source: Traffic Volume Trends and Energy Information Administration



**HAVING LESS OF THIS...**



**REQUIRES MORE OF THIS...**

HAVING MORE OF THIS...



REQUIRES LESS OF THIS...



**Building  
from our  
Values**

EXP JUN

INDIANA

INDIANA  
INDIANA  
INDIANA  
KG1680



KG 1680

Kids First

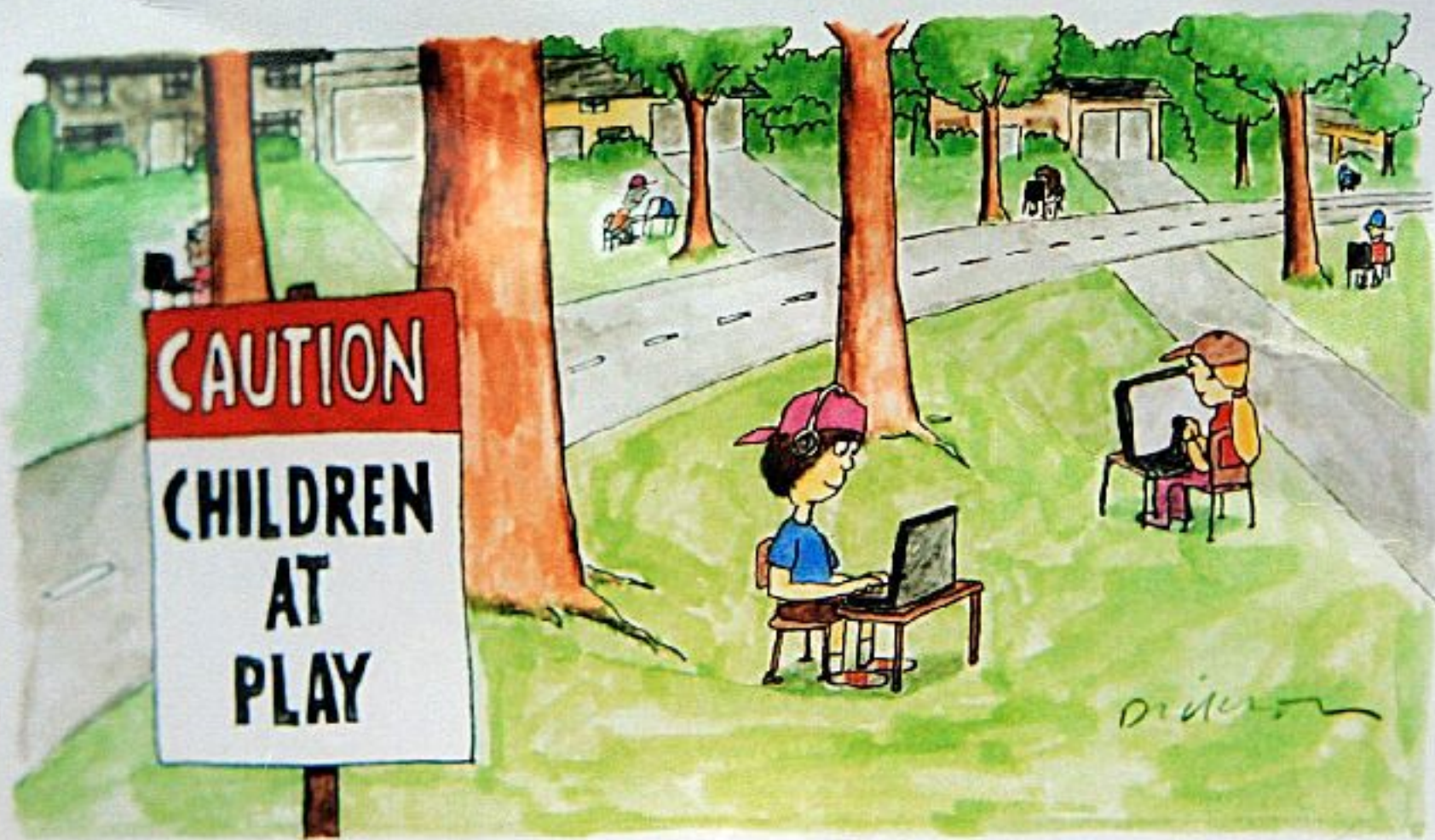




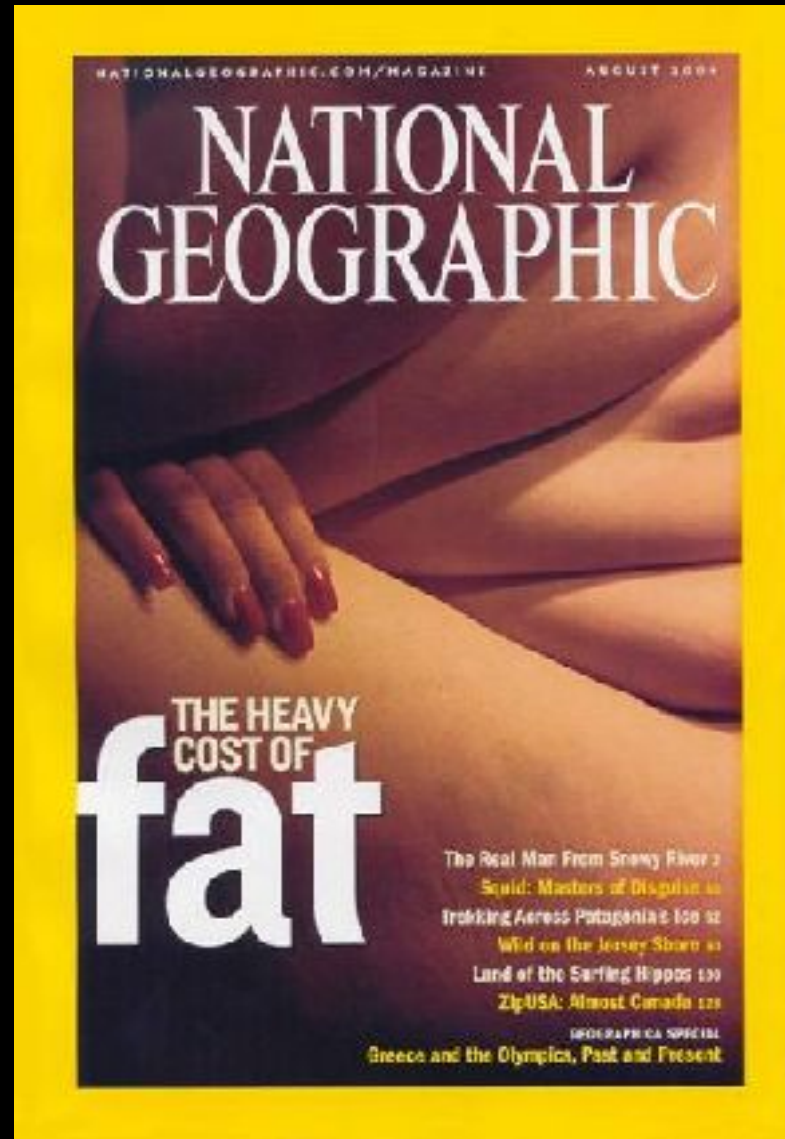
...we often forget about the people







**Your patient isn't the only one who  
has become fat**





# Depressive Disorders

**19 million American adults**

- **Leading cause of disability in the USA**
- **Treatment:**
  - **Medication**
  - **Social Contact, including therapy**
  - **And.....**



# Surgeon General's Report

21% US citizens ages 9-17 have a diagnosable mental or addictive disorder associated with at least minimum impairment





# Childhood needs

1. To develop fully children need a broad range to roam
2. U.S. children today have a range **one/ninth** of their parents
3. Einstein roamed the streets of Munich at the age of four, exploring on his own
4. Our most important neural pathways are developed before the age of nine.





Forest Hills Elementary School  
- Travel Routes Survey -



The City of Lake Oswego is doing a study involving travel routes to your school. We would greatly appreciate your help since this involves how you travel to school.

Please write a short paragraph below describing what your trip to school each morning feels like to you.

My trip to school every morning feels cold, quiet, and nice but when I sing when I'm walking I feel happy. I even sing when it's raining but if someone comes by I stop singing when it rains my shoes get wet & muddy. I also have to walk 8 blocks to school so my feet get hurt. I also see people walking there dogs but their friendly. I see cat that are nice. I sometimes pet the dogs & cats. I always see beautiful flowers, small trees, birds, and the wind always feel cool.





**Childhood is a holistic process, different for each individual child. Many children do not learn effectively exclusively within a classroom. They need alternative, hands-on learning environments to match their varied learning styles.**



I shopped for a house,  
but I forgot to shop  
for a community to  
live in

...Cheryl

from a suburban Edmonton,  
Alberta, Canada Neighborhood

Florida has the lowest  
rate of volunteerism  
in the nation.

What is that all  
about?



**What's Wrong Here?**



**America's Wealthiest County**



**What the Community**

**Provided**

**What the Customer**

**Wanted**





**What the Customer  
Wanted**

**What the Community  
Provided**



**Who we did not  
build for**

**Who we built for**





**Who we did not  
build for**

**Who we built for**



**Who we did not  
build for**

**Who we built for**







**The Pedestrian in America has been  
marginalized compromised to Death**

***“What is the first thing an infant wants to do and the last thing an older person wants to give up?”***

***Walking is the exercise that does not need a gym. It is the prescription without medicine, the weight control without diet, and the cosmetic that can't be found in a chemist. It is the tranquilizer without a pill, the therapy without a psychoanalyst, and the holiday that does not cost a penny. What's more, it does not pollute, consumes few natural resources and is highly efficient. Walking is convenient, it needs no special equipment, is self-regulating and inherently safe.***

***.”***



**A walkability plan must set a stage for all other modes of transportation to work, including transit. If people cannot walk then transit remains ineffective.**





**Thirty percent of North Americans old enough to drive do not drive. This percentage is increasing.**



Encourage Your Hopes  
**Not** Your Fears



**Walkable Communities will Grow and Accommodate your needs**





**As we age our need for association will continue to grow**









**As we age access to gentle, friendly exercise will be vital**





**As we age access to gentle, friendly exercise will be vital**





**As we age access to fun ways to move and strut our stuff will be rewarding**













**As we age access to healthy foods will be critical**



Brannley - The best Cooking  
with Sugar, Honey  
centre!  
pick + Mix

CHEGWORTH VALLEY  
hand selected, top processed fruit  
Egremont Russet  
Very Crisp + Juicy  
£1.80 kilo Pick and Mix

CHEGWORTH VALLEY  
hand selected, top processed fruit  
Jonagored  
Sweet, Crisp + Juicy  
£1.80 kilo Pick and Mix

CHEGWORTH VALLEY  
hand selected, top processed fruit  
Braeburn  
Very crisp + Juicy  
+ Sweet  
£1.80 kilo Pick and Mix



ASPARAGUS  
NEW SEASON

TENDER  
3 BUNCHES  
FOR \$5.00

3 BUNCHES







**As we age access to healthy foods will be critical**













**As we age access to gentle, friendly exercise will be vital**



















# The Day that Bubbles Froze Before Hitting the Ground



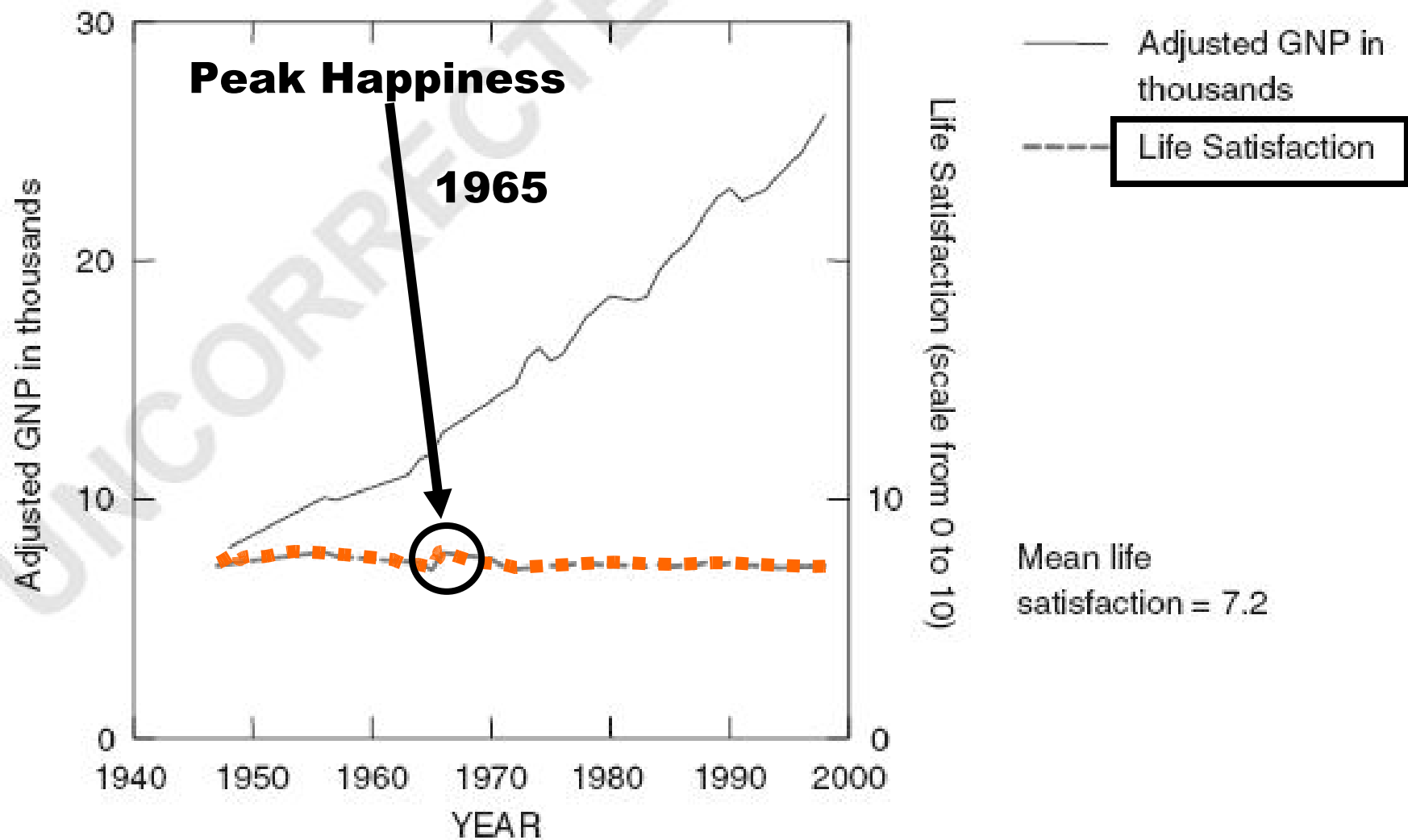


Fig. 1. U.S. gross national product (GNP) and mean life satisfaction from 1947 to 1998.



















# Schools









# School Busing and Parent Drop Off's



School busing and parent drop off's account for as much as 30% of rush hour traffic.

In some towns afternoon school rush hour is bigger than the morning commuter rush hour. This effect is part of an undesired result of poorly located, oversized schools, poor walkability, wide roadways, poor neighborhood design and school busing not being charged to local school boards.

THERE IS TOO MUCH TRAFFIC  
FOR BILLY TO WALK TO SCHOOL;  
SO WE DRIVE HIM.







Honolulu, Hawaii





**17<sup>th</sup> Avenue and Vicente Street**

San Francisco, California







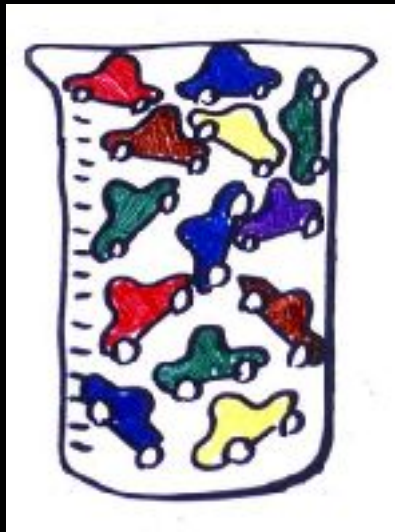
**We need to see the  
world through the eyes  
and feet of our children**











**The simple needs of automobiles are more easily understood and satisfied than the complex needs of cities, and a growing number of planners and designers have come to believe that if they can only solve the problems of traffic, they will thereby have solved the major problems of cities.**



**Following that philosophy led to this, redundantly.**



**A new beaker and measure will lead to this.**









**New measure for street performance:**

**People come to your street to shoot their wedding pictures**







**"If we want a booming economy of mom and pop stores, we'd better build the environment where they succeed"**











# The Day that Bubbles Froze Before Hitting the Ground





# Density with Design



Dover Kohl & Partners



# Density with Design



Dover Kohl & Partners



# Density with Design



Dover Kohl & Partners



# Density with Design



Dover Kohl & Partners











# What are the problems here?



Lack of Security

Lack of people

Lack of investment

Lack of diversity

Auto dependence

No place to buy a popsicle

Lack of diversity

Lack of activity







Monterey, California



Cleveland, Ohio.



Monterey, California











AQUARIAN BICYCLES

486

MAIL BOXES ETC

MAIL BOXES ETC



# Parks



**Parks within 1/8<sup>th</sup> Mile of each house (800 feet)**





Petaluma, California





Petaluma, California



## Why we cannot build our way out of traffic



Vehicle miles traveled (VMT) around the U.S. have increased by 70 percent over the last 20 years, compared with a **two percent** increase in new highway construction. The U.S. General Accounting Office predicts that road congestion in the U.S. will **triple in 15 years** even if capacity is increased by 20 percent.

**Traffic is growing about five times faster than the growth in population.**

**(Data compiled for a report to the U.S. Department of Transportation in 2006 written by Stephen Polzin, (transportation researcher at the University of South Florida in Tampa.)**



# ***The World is Changing***

***Expect:***

## ***Option One:***

***25% more traffic every ten years.***

***More intersections failing.***

***More people spreading out ~~Also~~ Expect:***

***canyons, ridges and other high-risk locations per household***

***locations.***

***Limited new lanes and limits on intersections***

***being rebuilt***

***More demand for slowing traffic***

***More demand for traffic to stay in motion***





# ***Option Two:***

***Return to Traditional streets  
and land uses***

***More connectivity***

***More walking, bicycling and transit***

***People living closer to services,  
shorter trips by time and distance***

***More funding for well located engine***





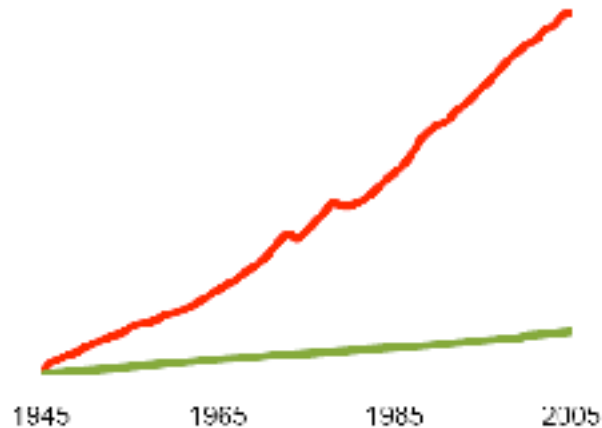








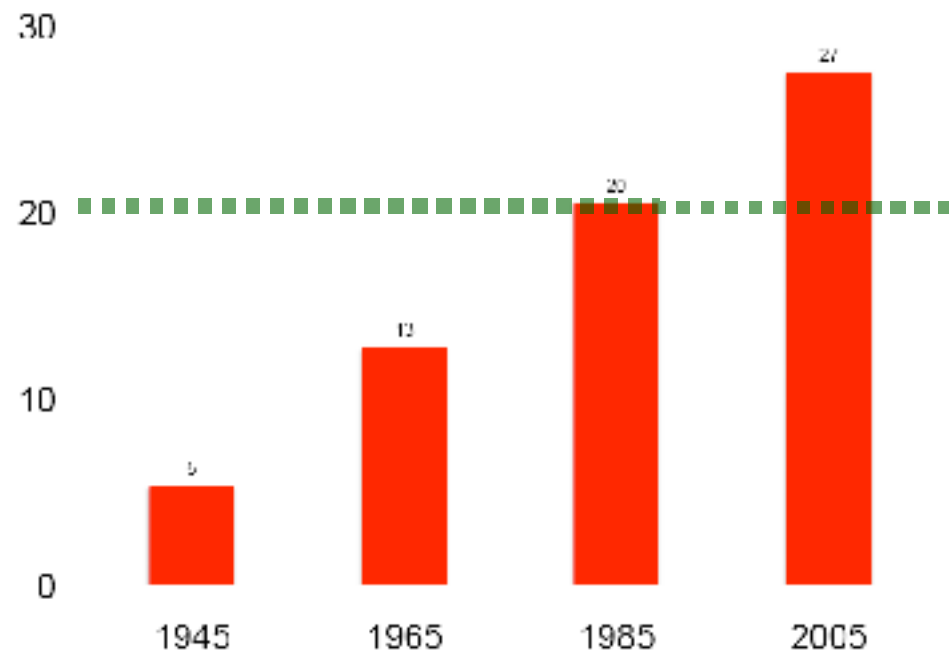
## Vehicle Miles Traveled 1945 to 2005



Norman W. Garrick

**Driving more miles each year (like obesity) is a visible symptom, an indicator of a disease that is running amuck in each of our towns and villages.**

## Miles per day per capita 1945 and 2008





# *City Making*





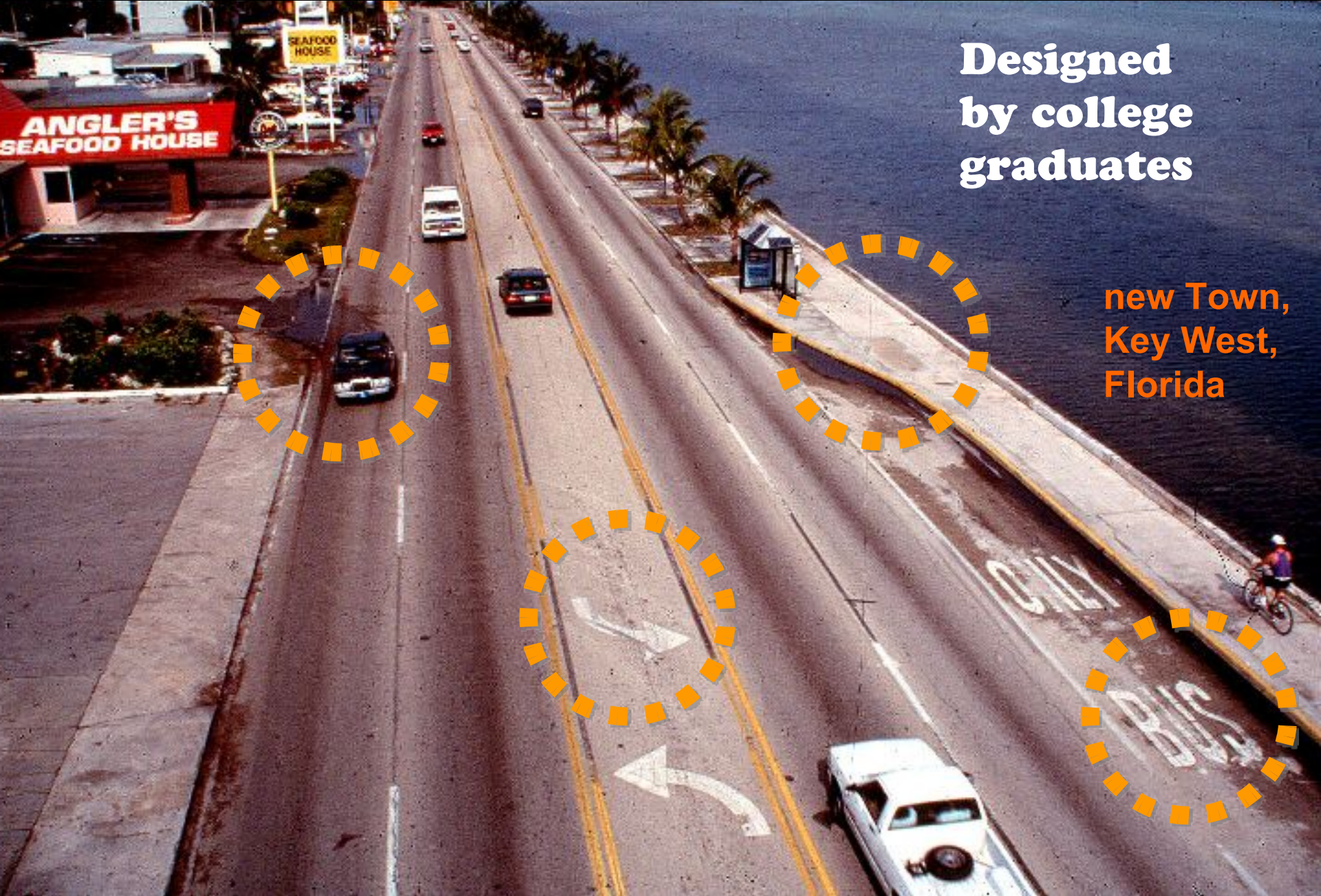


**Narrow streets**  
**Short blocks**  
**Tight corner radii**  
**Great plazas**  
**Beautiful buildings**  
**Limited parking**

**Built by Pirates**

**Old Town,  
Key West,  
Florida**





**Designed  
by college  
graduates**

**new Town,  
Key West,  
Florida**







# Seaside, Florida

**Townhouses frame the square while open space provides an outdoor environment for nearby residents**

**The largest lots of the TND can be at the edge**

**Civic buildings  
Should be  
terminate street or  
open space vistas**

**The intensity of  
uses should  
gravitate away  
from the  
neighborhood  
center**

**In these cases where  
a TND is bordered by a  
principal street higher  
intensity uses such as  
medium density  
housing can be used in  
creating the edge**

**Based on the 1928 drawings by James Perry**





1870  
BIRD'S EYE VIEW OF ALEXANDRIA, VA





**If Cities are to reduce auto-dependence a working alternative should include:**

**Developers no longer block access to those places people want to reach.**













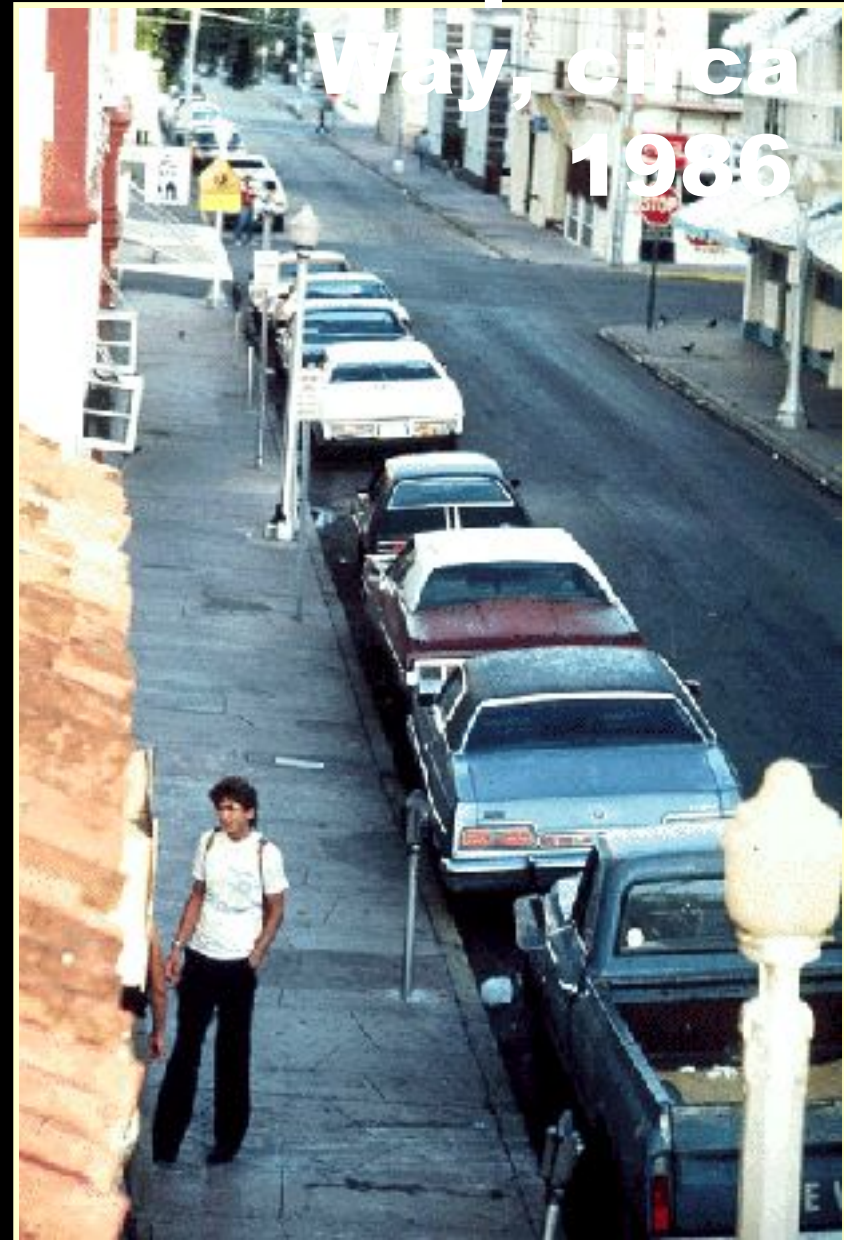




# Before and After



# Espanola Way, circa 1986















**CITY OF MIAMI BEACH**  
PUBLIC WORKS DEPARTMENT

ESPANOLA WAY STREETSCAPE  
PROJECT COST  
\$259,600

MAYOR: David Derner  
COMMISSIONERS: Matti Herrera Bower  
Simon Cruz  
Luis R. Garcia, Jr.  
Saul Gross  
Jose Smith  
Richard Steinberg  
CITY MANAGER: Jorge M. Gonzalez

General Contractor  
FH Paschen, SN NIELSEN

Funding By:  
2003 Transit Surtax (PTP) Funds





# Principles

# Principles



**Not Walkable**

**High Car Dependency**

**Serious Congestion**



**Walkable**

**Low Car Dependency**

**Moderate Congestion**





# Ten Steps To Walkability

**Compact, lively  
town center**

**Low speed streets,  
distributed  
volumes**

**Fine grained  
streets, many  
trails, transit  
links**

**Neighborhood  
schools  
and parks,  
within one  
quarter mile  
or one  
eighth mile**



**Public places  
with inviting  
features:  
benches,  
restrooms,  
shade, water  
convenient, safe  
and efficient  
crossings**

**Many people of  
all ages and  
abilities walking  
many hours**

**Celebrated  
public space and  
public life,  
parades,  
markets,  
festivals, awards  
Land use and  
transportation  
partnerships**

**Affordable,  
inspiring, well  
maintained  
streets and  
homes.**



# Comprehensive Approach



**Town making is based on a comprehensive, collaborative approach, using all arts, sciences and services to design communities for “people first.”**





**Personal choices of where to sit or recreate are not accidental. Balance of sun and shade are determinant in active and passive activities. In warm climates like Florida, shade is a critical asset to the comfortable year round use of a space.**



**Why did this person choose this spot?**

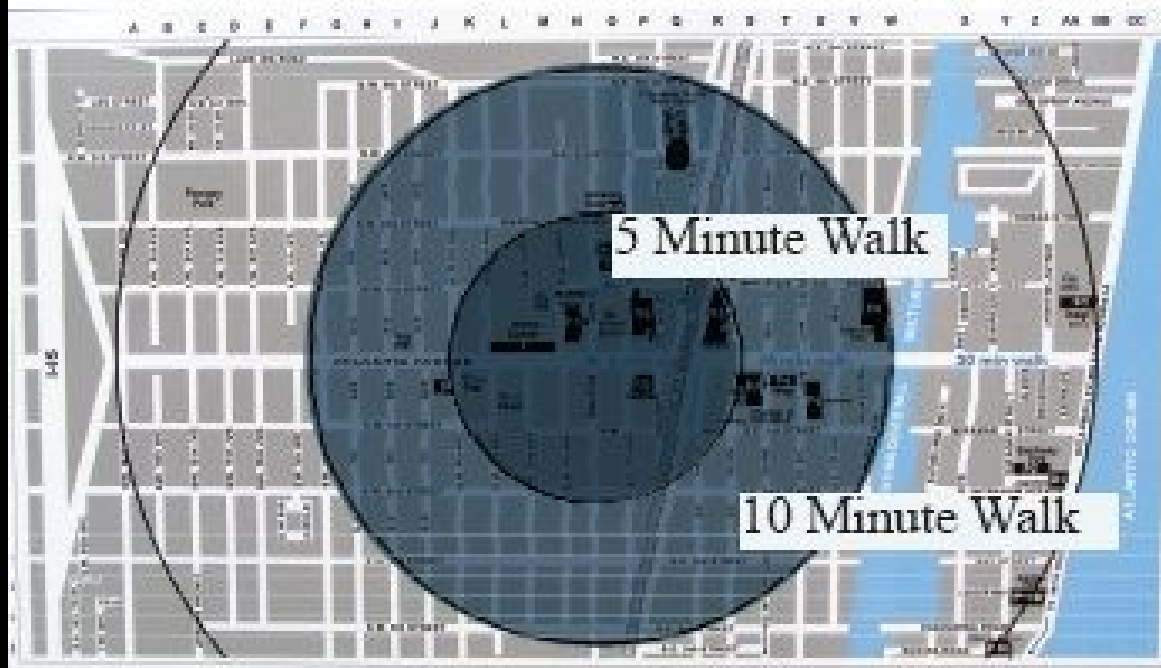


**Why are these the only three empty tables at this restaurant?**

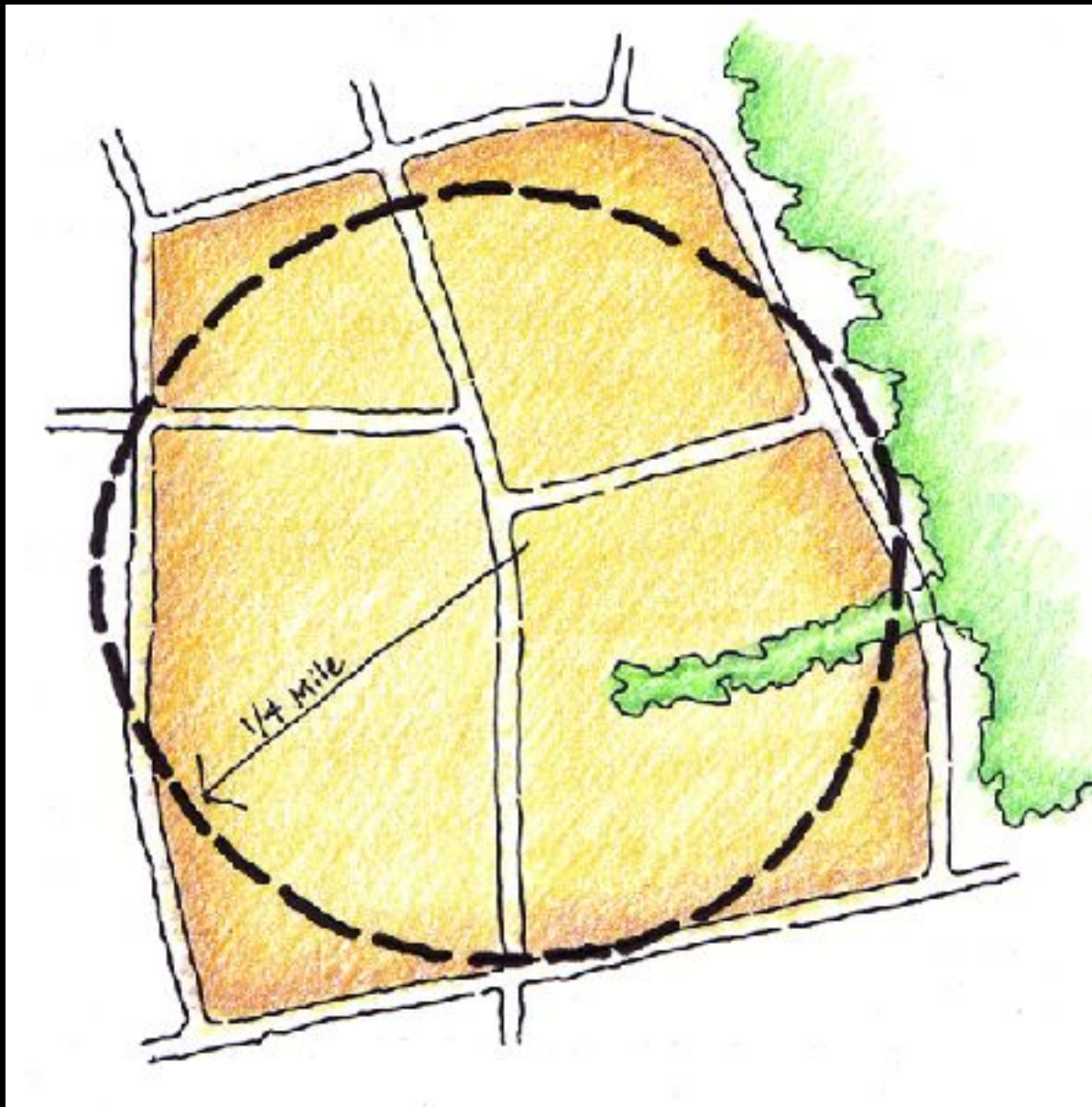






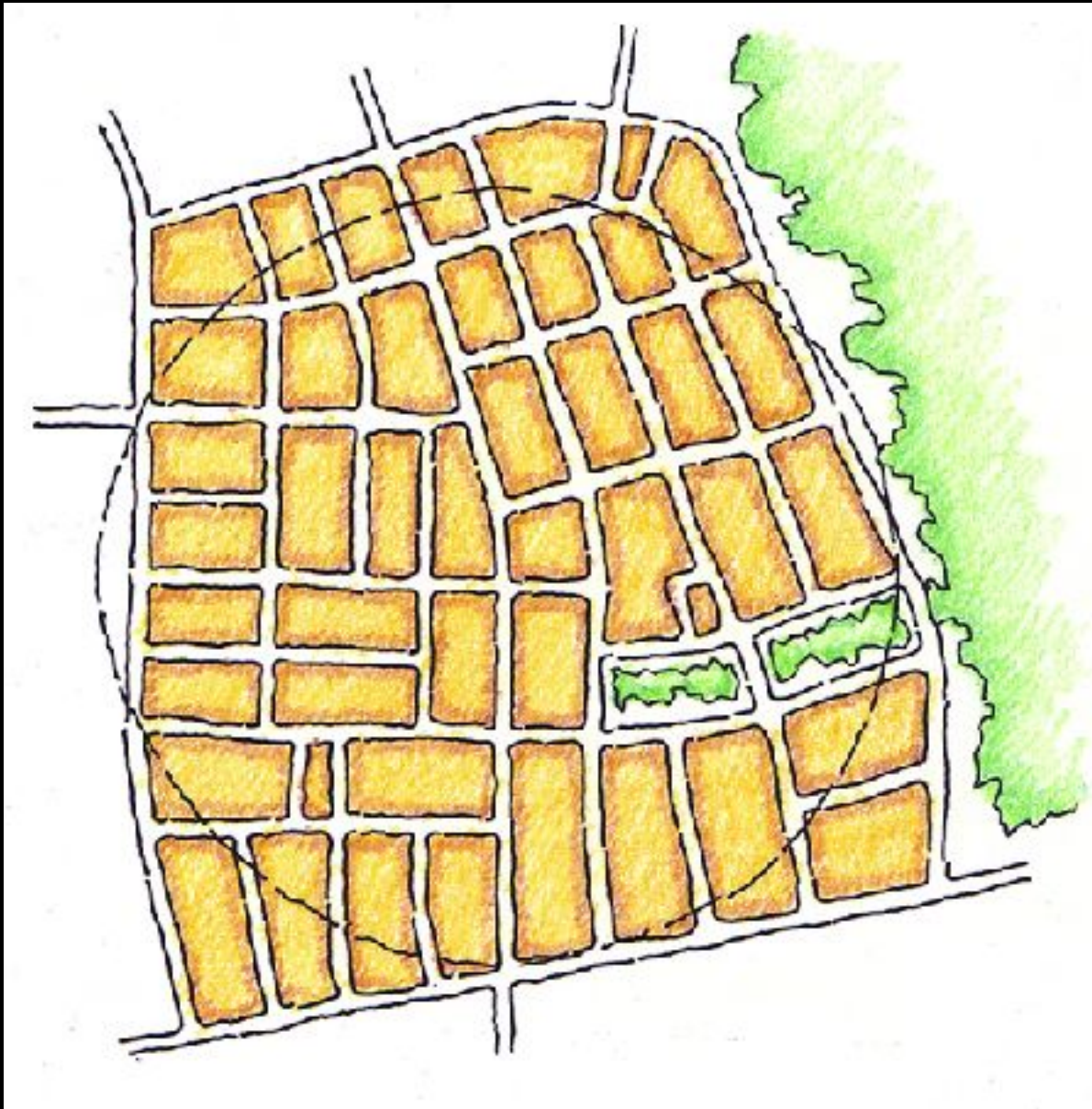






size  
neighborhoods for  
a 5-minute walk





**Make blocks a  
walkable size:**

block perimeters of  
1,500' to 2,000'

create a connected  
network of streets





Design for a mix  
of land uses:

Centers include  
denser housing, a  
square, civic uses,  
and neighborhood-  
oriented retail.



**Mixed Use**

MIXED USE





**If Cities are to  
reduce auto-  
dependence a  
working alternative  
should include:**

**Buildings no longer  
“moon” the street**











# THE LITTLE CORNER STORE

BOTTLED BY THE  
CORNER STORE

SUPER LOTTO

WATER

Coca-Cola

















Source: Fisher & Hall Urban Design

**Once we understand the context of a place, its history, its culture, its climate, its topography, its land settlement patterns, then we can start the design process in earnest.**

**Now that we know the new land use, we can design the street!**

Petaluma, California







**Such places do not sprout by happenstance. Driven by irresistible economic forces and shaped by subtly shifting social patterns, they are being created, down to the tiniest detail, by a handful of major developers with a master plan for the new America.**

**.... NY Times, August 15,  
2005**





Fargo, North Dakota





Fargo, North Dakota















# Exclusionary Zoning Workforce Housing

**In about half of central Ohio's suburbs, those who teach the children, patrol the neighborhoods and put out fires can't afford to live among the people they serve.**

**Exclusionary: any community that did not allow for more than 8 residential units per acre.**





# Exclusionary Zoning Workforce Housing

**"Granville will never allow it to happen," said Officer Keith Blackledge. He and fellow officers have tried for two years to unionize their department to get higher pay, perhaps enough to enable them to live in the Licking County village 35 miles east of Columbus.**

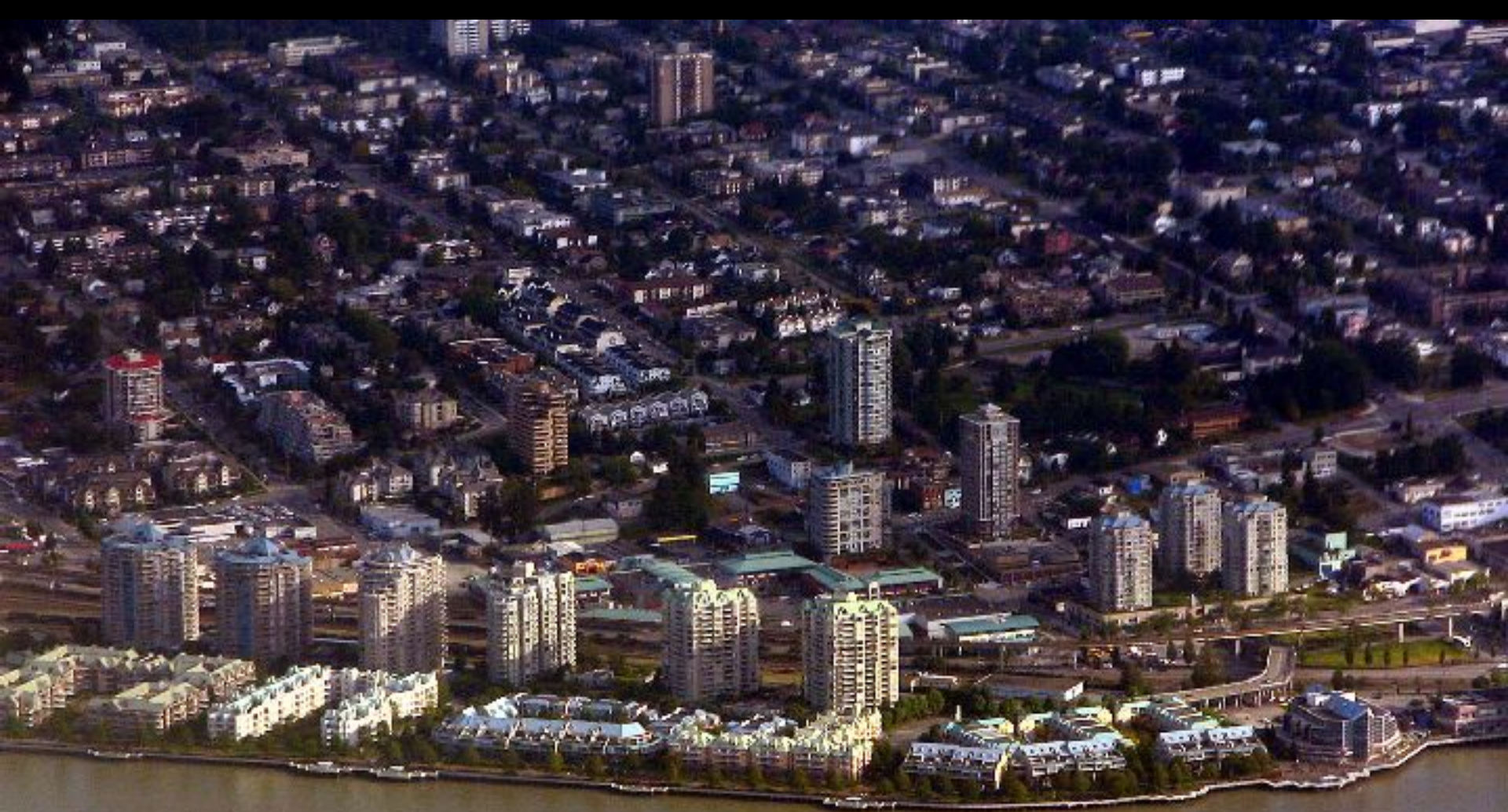
**"Police officers in any neighborhood are going to be good for everyone," said Officer Jon Davis. "Just having them there will improve the quality of the neighborhood."**











**Vancouver now has so much density that there is no comparison until you travel to Asia ... to Beijing, Hong Kong, or Tokyo.**

**As Vancouver has built itself into the one city in the “Most Livable City in the World” ... Vehicle Miles Per Day (VPD) is declining. Registered car ownership is also declining.**

**Virtually all growth occurred in brown fields, industrial yards, old rail yards. Virtually all former single family homes are still in place. Loved, cared for, and worth a heck of a lot of money**























**Many Eyes  
on the Trail**

**Different  
Elevations**

**Buildings  
Are Tiered**

**Full Public  
Access**

**Quality  
Edges**





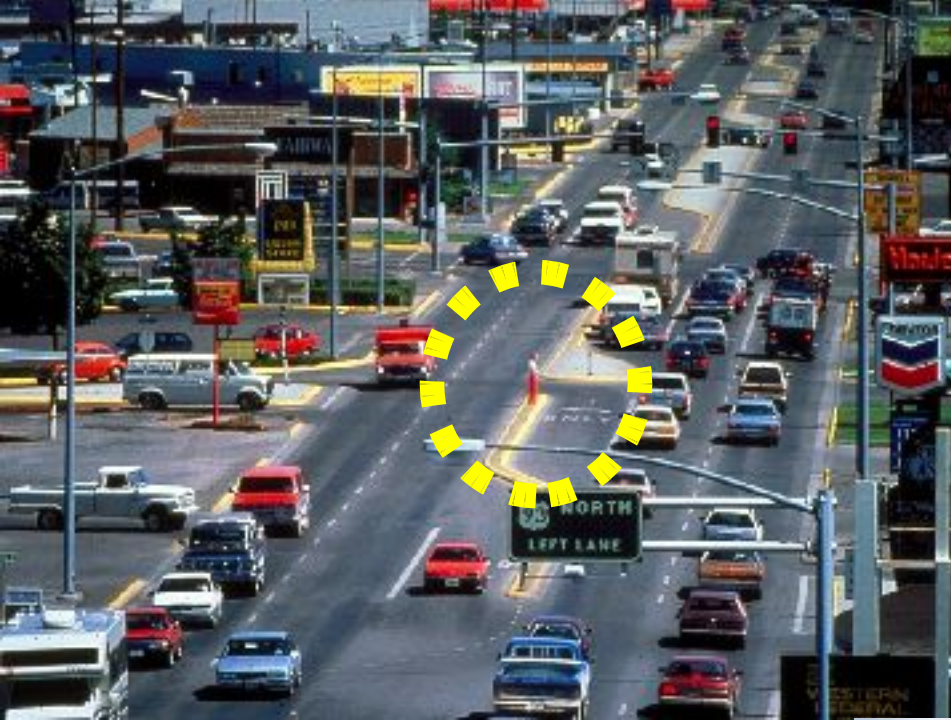




# ***Complete Streets***







Highway 93, Missoula, Montana

**USA**



**Canada**

Marine Drive, Dundarave, B.C.





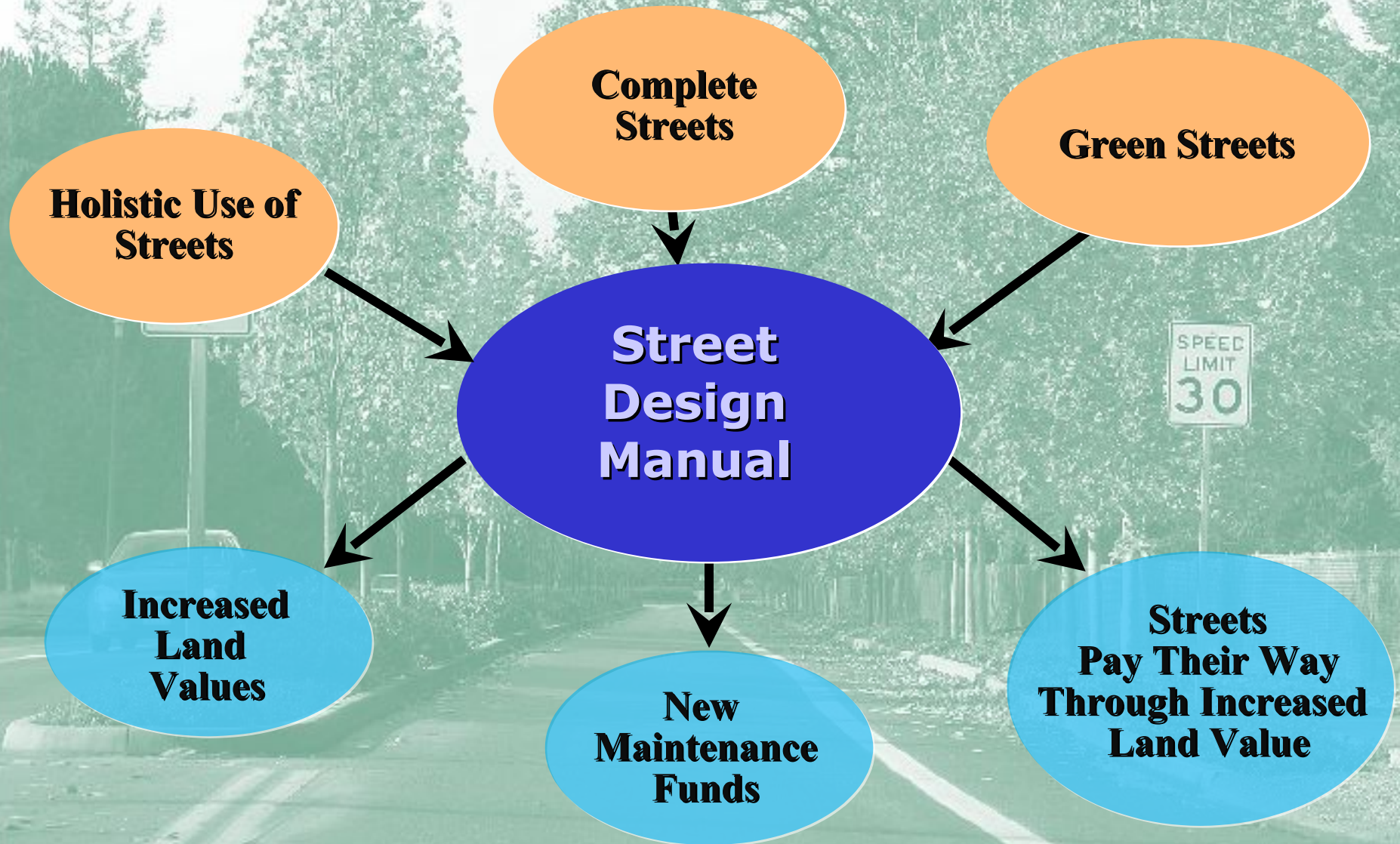
Marine Drive, Dundarave, B.C.







# Purpose





# The notion of combining land use and transportation is not new

“Automobiles are often conveniently tagged as the villains responsible for the ills of cities and the disappointments and futilities of city planning. But the destructive effects of automobiles are much less a cause than a symptom of our incompetence at city building.

**The simple needs of automobiles are more easily understood and satisfied than the complex needs of cities, and a growing number of planners and designers have come to believe that if they can only solve the problems of traffic, they will thereby have solved the major problems of cities.**

Cities have much more intricate economic and social concerns than automobile traffic. How can you know what to try with traffic until you know how the city itself works, and what else it needs to do with its streets? You can't.”

*Jane Jacobs, Death and Life of Great American Cities , 1961*





**Where There's  
Opposition  
There Needs To Be  
Courage**











**Draw it,  
and see  
if it works**







# the review

the official magazine of the Michigan Municipal League

May/June 2010

“SINCE THE BOARDWALK OPENED UP,  
IT PROBABLY INCREASED OUR SUMMER  
BUSINESS BY AT LEAST 15 PERCENT.”

—Joe Mackle  
Brighton restaurant operator

## Walkable Communities

From Abbey Road to Brighton Road



DREAMING BIG  
IN **EDWARDSBURG**

CONNECTIVITY  
IN **CADILLAC**

**MARQUETTE'S**  
FORM-BASED CODES





ALTERA

www.karenbundy.com

Karen Bundy  
STUDIO

OPEN  
Grand Opening



**Is this an  
age-friendly  
place?**











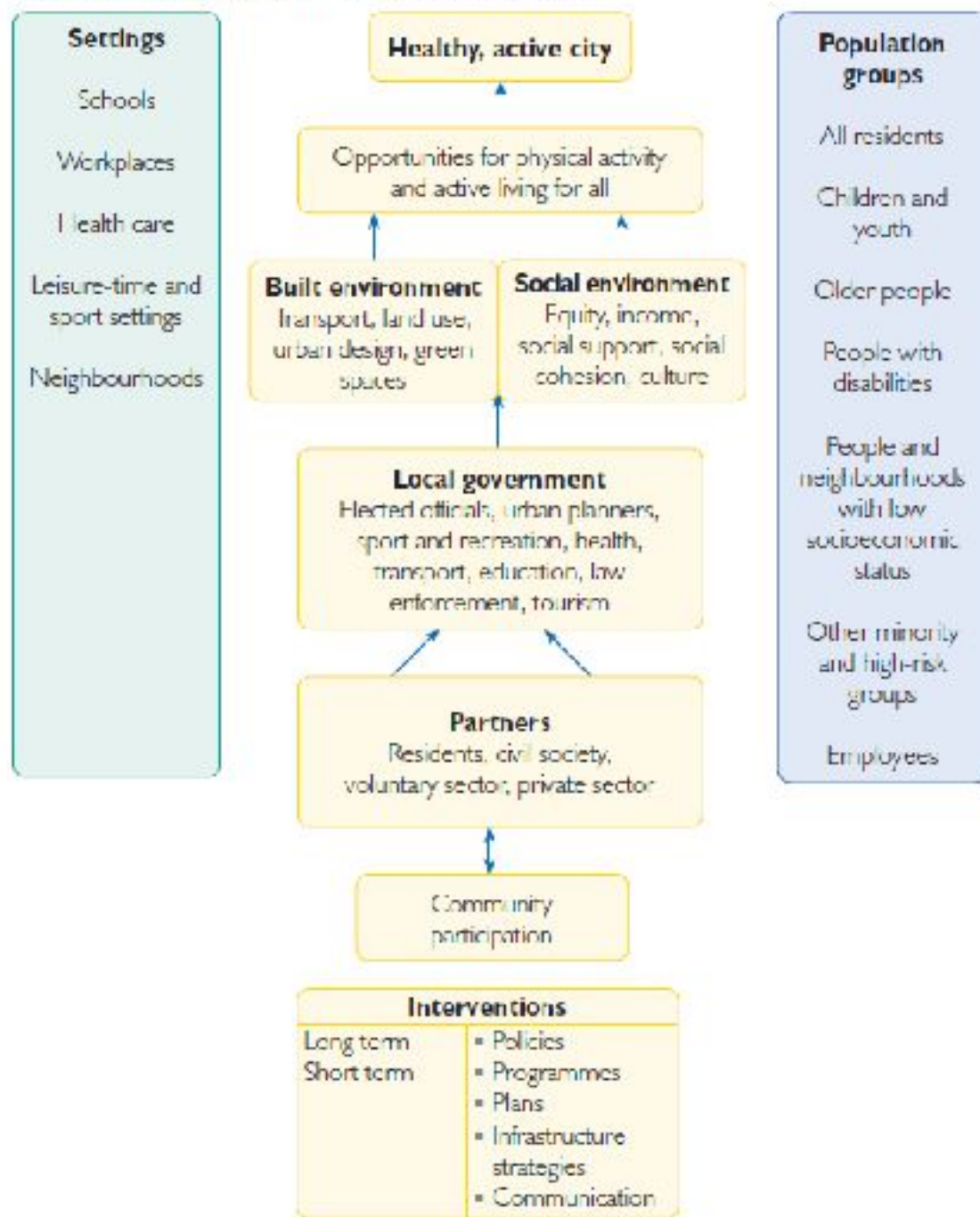
**CITY** **City Supplies**  
764.8884  
Phone: 764.8884  
Fax: 764.8884  
Address: 764.8884  
City: 764.8884  
State: 764.8884  
Zip: 764.8884

**CITY**  
764.8884  
Phone: 764.8884  
Fax: 764.8884  
Address: 764.8884  
City: 764.8884  
State: 764.8884  
Zip: 764.8884

Puerto Rico - Todd Clements



**Fig. 1. A framework for creating a healthy, active city**





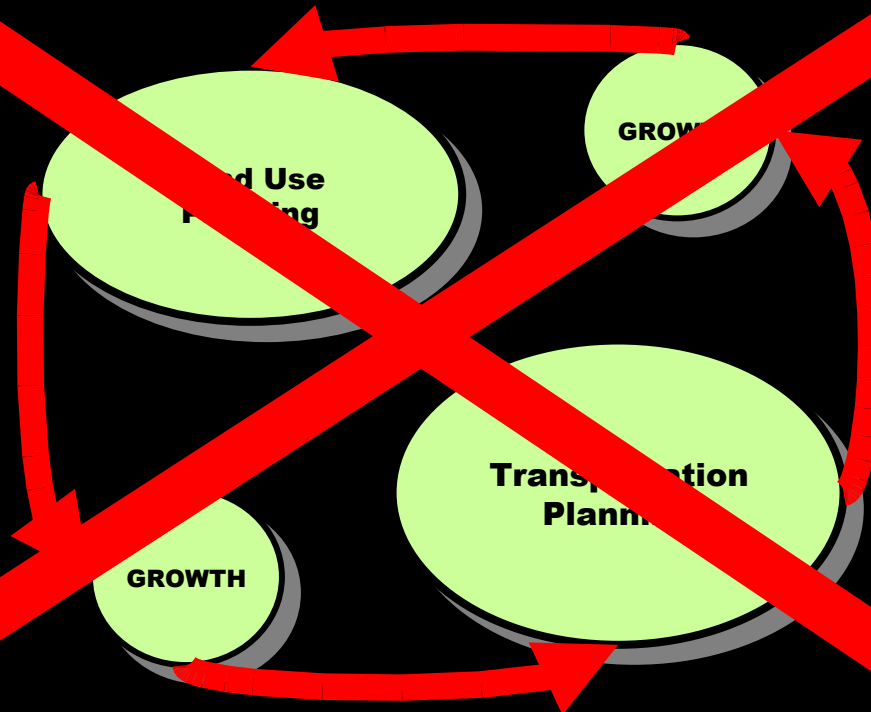
# The Cycle of Strip Development

## INPUTS

- Auto-oriented Business
- Single Use Zoning
- Single Family Residential

## OUTCOMES

- Wide Roads
- Increased Traffic
- More Traffic



## OUTCOMES

- Isolated Neighborhoods
- Multiple Automobile Trips
- Poor Mobility
- Difficult Walking

## PUTS

- Traffic Demand Forecasting
- Congestion



# Breaking The Cycle of Strip Development

## INPUTS

- Diversity of Business
- Mixed Use Zoning
- Diversity of Residential Units
- Context Sensitive Solutions
- Community Involvement



## OUTCOMES

- Healthy Neighborhoods
- Choices of Transportation
- More Open Space
- Sense of Place
- Sense of Community
- Age-in-Place Friendly

**GROWTH**

## OUTCOMES

- Increased Mobility
- More Walking & Bicycling
- Increased Access
- Sustainable
- Prosperity





Every man must decide whether

he will walk in the light of creative altruism



or the darkness of destructive selfishness.

Martin Luther King, Jr.

































































SPEED  
LIMIT  
25

NO  
SHOULDER

ONE  
WAY  
↑





















WILSON  
KENTON  
AND SONS



































